Thin Solid Films, *159* (1988) xi

Contents

CHARACTERIZATION OF FLOATING LANGMUIR–BLODGETT FILMS

Direct characterization of monolayers at the air–water interface 1
H. Möhwald (Mainz, F.R.G.)

An X-ray scattering study of lipid monolayers at the air–water interface and on solid supports 17
K. Kjaer, J. Als-Nielsen (Roskilde, Denmark), C. A. Helm, P. Tippmann-Krayer (Garching, F.R.G.) and H. Möhwald (Mainz, F.R.G.)

Synchrotron X-ray study of the structure of a Langmuir monolayer and the attached solute molecular layer 29
S. G. Wolf, E. M. Landau, M. Lahav, L. Leiserowitz (Rehovot, Israel), M. Deutsch (Ramat Gan, Israel), K. Kjaer and J. Als-Nielsen (Roskilde, Denmark)

X-ray and neutron reflectivity from spread monolayers 43
M. J. Grundy, R. M. Richardson, S. J. Roser (Bristol, U.K.), J. Penfold and R. C. Ward (Didcot, U.K.)

Continuous recording of the evaporation rate of water through monolayers . 53
H. K. Cammenga and D. Koenemann (Braunschweig, F.R.G.)

Interdependence between crystallization and polymerization in diacetylene monolayers 63
H. D. Göbel (Garching, F.R.G.) and H. Möhwald (Mainz, F.R.G.)

Hydrated polar groups in lipid monolayers: effective local dipole moments and dielectric properties 73
V. Vogel and D. Möbius (Göttingen, F.R.G.)

Structural studies of intermolecular interactions in pure and diluted films of a redox-active phthalocyanine. 83
S. Palacin, P. Lesieur, I. Stefanelli and A. Barraud (Gif sur Yvette, France)

Study on the photoreaction process of 6-octadecyl sulphane imide naphthoquinone diazide Langmuir films. 91
K. Ogawa, H. Tamura, M. Hatada and T. Ishihara (Osaka, Japan)

Fluorescence anisotropy studies of orientational order of Langmuir–Blodgett multilayers. 101
J. D. LeGrange, H. E. Riegler, W. P. Zurawsky (Princeton, NJ, U.S.A.) and S. F. Scarlata (New York, NY, U.S.A.)

Synchrotron diffraction studies of lead octadecanoate, tetracosanoic acid and 1-eicosanol monolayers on water 111
B. Lin, J. B. Peng, J. B. Ketterson and P. Dutta (Evanston, IL, U.S.A.)

Energy transfer and aggregation in monolayers containing porphyrins and phthalocyanines. 115
M. Flörsheimer and H. Möhwald (Garching, F.R.G.)

Electric-field-induced domain movement in phospholipid monolayers. 125
W. M. Heckl, A. Miller and H. Möhwald (Garching, F.R.G.)

Effects of molecular organization on photophysical and photochemical behavior: quenching by subphase iodide of fluorescence in pyrene-bearing probes at the nitrogen–water interface 133
M. Bohorquez and L. K. Patterson (Notre Dame, IN, U.S.A.)

Monolayer characteristics of some multinucleate phthalocyanines 141
J.-H. Kim, T. M. Cotton, R. A. Uphaus (Lincoln, NE, U.S.A.) and C. C. Leznoff (Ontario, Canada)

Measurement of fluorescence depolarization for chlorophyll-a and chlorophyll-b in spread monolayers at the nitrogen–water interface 149
J.-P. Chauvet and L. K. Patterson (Notre Dame, IN, U.S.A.)

SURFACE RHEOLOGY AND MONOLAYER TRANSFER

Viscoelasticity of pentadecanoic acid monolayers. 159
J. C. Earnshaw and P. J. Winch (Belfast, U.K.)

Surface rheology of spread monolayers. 171
M. R. Buhaenko, J. W. Goodwin and R. M. Richardson (Bristol, U.K.)

Entrainment of aqueous subphase in Langmuir–Blodgett films. 191
M. P. Srinivasan, B. G. Higgins, P. Stroeve and S. T. Kowel (Davis, CA, U.S.A.)

Two-step transfer of conducting Langmuir films from a glycerol subphase . . 207
J. Richard, A. Barraud, M. Vandevyver and A. Ruaudel-Teixier (Gif sur Yvette, France)

Using the transfer of a Langmuir monolayer as a probe of wetting 215
J. B. Peng, P. Dutta and J. B. Ketterson (Evanston, IL, U.S.A.)

Preparation and characterization of monolayers and multilayers of preformed polymers 221
G. Duda, A. J. Schouten, T. Arndt, G. Lieser, G. F. Schmidt, C. Bubeck and G. Wegner (Mainz, F.R.G.)

Measurements of the forces of emersion and immersion and contact angles during Langmuir–Blodgett deposition 231
M. R. Buhaenko and R. M. Richardson (Bristol, U.K.)

Formation and conductivity of lipid-free multilayer systems of copper phthalocyanine 239
K. Tian, M. Gong, Y. Bai, Y. Zhao, T. Li (Changchun, China), X. Ma and Z. Zhu (Kaifeng, China)

STRUCTURAL CHARACTERIZATION OF LANGMUIR–BLODGETT FILMS

Characterization methods for Langmuir–Blodgett films 243
M. Vandevyver (Gif sur Yvette, France)

Structure and temperature dependence of fatty acid Langmuir–Blodgett films studied by neutron and X-ray scattering 253
M. R. Buhaenko, M. J. Grundy, R. M. Richardson and S. J. Roser (Bristol, U.K.)

Application of X-ray photoelectron spectroscopy and Fourier transform IR–reflection absorption spectroscopy to studies of the composition of Langmuir–Blodgett films 267
K. Kobayashi, K. Takaoka and S. Ochiai (Tokyo, Japan)

Near-edge X-ray absorption fine structure studies of oriented molecular chains in polyethylene and Langmuir–Blodgett monolayers on Si(111) 275
J. P. Rabe (Mainz, F.R.G.), J. D. Swalen, D. A. Outka and J. Stöhr (San Jose, CA, U.S.A.)

Characterization of in-plane and out-of-plane molecular orientation in Langmuir–Blodgett films of merocyanine dyes using electron spin resonance. 285
S.-I. Kuroda, K. Ikegami, K. Saito, M. Saito and M. Sugi (Ibaraki, Japan)

Scanning tunnelling microscopy of thin organic films 293
J. H. Coombs (Cambridge, U.K.), J. B. Pethica (Oxford, U.K.) and M. E. Welland (Cambridge, U.K.)

Surface structure investigation of Langmuir–Blodgett films 301
H. G. Braun, H. Fuchs and W. Schrepp (Ludwigshafen am Rhein, F.R.G.)

Orientational studies of Langmuir–Blodgett films of porphyrins with polarized resonant Raman spectroscopy 315
P. Lesieur, M. Vandevyver, A. Ruaudel-Teixier and A. Barraud (Gif sur Yvette, France)

Plasmon surface polariton fields for the characterization of thin films 323
B. Rothenhäusler (Garching, F.R.G.), C. Duschl and W. Knoll (Mainz, F.R.G.)

Vibrational Davydov splitting in 7-(2-anthryl)-1-heptanoic acid Langmuir–Blodgett films 331
W. S. Durfee, M. Tüshaus, E. Schweizer, W. Storck, F. Willig and M. von Frieling (Berlin, F.R.G.)

Multipiled monolayer assembly of J-aggregates of squarylium dye with short alkyl chains 337
S. Kim, M. Furuki, L. S. Pu (Kanagawa, Japan), H. Nakahara and K. Fukuda (Saitama, Japan)

Control of structure in Langmuir–Blodgett films of terphenyl liquid crystal compound 345
T. Sakuhara (Matsudo, Japan), H. Nakahara and K. Fukuda (Saitama, Japan)

Langmuir–Blodgett films of amphiphilic cyclodextrins 353
Y. Kawabata, M. Matsumoto, T. Nakamura, M. Tanaka, E. Manda (Ibaraki, Japan), H. Takahashi, S. Tamura, W. Tagaki (Osaka, Japan), H. Nakahara and K. Fukuda (Saitama, Japan)

Structure and dynamics in a Langmuir–Blodgett film at elevated temperatures 359
J. P. Rabe (Mainz, F.R.G.), V. Novotny, J. D. Swalen and J. F. Rabolt (San Jose, CA, U.S.A.)

Morphology and properties of Langmuir films containing tetrakis(cumylphenoxy) phthalocyanines 369
W. Barger, J. Dote, M. Klusty, R. Mowery, R. Price and A. Snow (Washington, DC, U.S.A.)

Microstructure and optical properties of mixed monolayers containing a J-band forming cyanine dye and various cosurfactants 379
C. Duschl, W. Frey, C. Helm (Garching, F.R.G.), J. Als-Nielsen (Roskilde, Denmark), H. Möhwald and W. Knoll (Mainz, F.R.G.)

Thermostability and photodesorption of Langmuir–Blodgett films 387
P. Tippmann-Krayer (Garching, F.R.G.), L. A. Laxhuber (San Jose, CA, U.S.A.) and H. Möhwald (Mainz, F.R.G.)

Fabrication of ordered Langmuir–Blodgett multilayers of octa-*n*-alkoxy phthalocyanines. 395
M. J. Cook, A. J. Dunn (Norwich, U.K.), M. F. Daniel, R. C. O. Hart (Malvern, U.K.), R. M. Richardson and S. J. Roser (Bristol, U.K.)

Aligned textures in multilayers of cadmium arachidate as seen by electron microscopy 405
P. Fromherz, C. Kemper and E. Maass (Ulm-Eselsberg, F.R.G.)

Electric field mapping in conducting Langmuir–Blodgett films 413
A. Barraud, J. Richard, A. Ruaudel-Teixier and M. Vandevyver (Gif sur Yvette, France)

Medium angle X-ray scattering of Langmuir–Blodgett films of cadmium salts of fatty acids 421
P. Fromherz, U. Oelschlägel and W. Wilke (Ulm-Eselsberg, F.R.G.)

Structure and dynamics of deposited lipid monolayers: low energy electron diffraction and scattering of thermal energy helium atoms 429
V. Vogel and C. Wöll (Göttingen, F.R.G.)

Langmuir–Blodgett monolayers studied by surface-sensitive X-ray absorption fine structure 435
H. Oyanagi (Ibaraki, Japan), M. Yoneyama (Yokohama, Japan), K. Ikegami, M. Sugi, S.-I. Kuroda, T. Ishiguro and T. Matsushita (Ibaraki, Japan

Fourier transform IR spectroscopy of protonated cadmium arachidate layers in different positions of a perdeuterated multilayer 443
T. Arndt and C. Bubeck (Mainz, F.R.G.)

X-ray diffraction of Langmuir–Blodgett films: establishing a new method for

the calculation of electron density distributions from a single set of intensity data 451
M. von Frieling, H. Bradaczek and W. S. Durfee (Berlin, F.R.G.)

Fourier transform IR studies of alternate layer acid–amine Langmuir–Blodgett films with pyroelectric properties 461
G. H. Davies, J. Yarwood, M. C. Petty and C. A. Jones (Durham, U.K.)

New asymmetric substitution of phthalocyanines: derivatives designed for deposition as Langmuir–Blodgett films 469
N. B. McKeown, M. J. Cook, A. J. Thomson (Norwich, U.K.), K. J. Harrison, M. F. Daniel (Malvern, U.K.), R. M. Richardson and S. J. Roser (Bristol, U.K.)

LETTERS

Electron microscopy of TF_oF_1 Langmuir–Blodgett films 479
A. Tomioka, T. Furuno, H. Sasabe (Saitama, Japan), T. Wakabayashi (Tokyo, Japan) and M. Yoshida (Kanagawa, Japan)

The effect of In_2O_3 on the electrical and structural properties of $CuInSe_2$ prepared by chemical spray pyrolysis L53
B. Haba, C. W. Bates, Jr., B. Brown, Z. Ndlela (Stanford, CA, U.S.A.) and G. Smestad (San Jose, CA, U.S.A.)

Densification of aluminum fluoride thin films by ion-assisted deposition . . . L57
J. D. Targove (Dayton, OH, U.S.A.), B. G. Bovard, L. J. Lingg and H. Angus Macleod (Tucson, AZ, U.S.A.)

Time variation of the interisland spacing at liquid nitrogen temperature for copper and silver island films L61
M. Pattabi and M. S. Murali Sastry (Madras, India)

Dislocations in epitaxial $Cd_{0.9}Mn_{0.1}Te$ films L65
S. Miotkowska, I. Miotkowski (Warsaw, Poland) and H. Bartsch (Halle, G.D.R.)

CORRIGENDUM 483
CONFERENCE ANNOUNCEMENTS 483
AUTHOR INDEX 485